CLAIMS

1. ~~(Amended)~~ A sputtering target for a magnetic recording medium obtained by rolling a Co-Pt-B-based ingot, wherein an average grain area of a B-rich phase is 90 μm^2 or less.

2. The sputtering target for a magnetic recording medium according to claim 1, wherein the sputtering target is made from 1 to 26 at% of Pt, 1 to 15 at% of B, and remainder being Co and unavoidable impurities.

3. The sputtering target for a magnetic recording medium according to claim 1, wherein the sputtering target is made from 1 to 40 at% of Cr, 1 to 26 at% of Pt, 1 to 15 at% of B, and remainder being Co and unavoidable impurities.

4. The sputtering target for a magnetic recording medium according to claim 1, wherein the sputtering target is made from 1 to 40 at% of Cr, 1 to 15 at% of B, and remainder being Co and unavoidable impurities.

5. ~~(Amended)~~ The sputtering target for a magnetic recording medium according to any one of claims 2 to 4, further containing one or more elements selected from Cu, Ru, Ta, and Nd in an amount of 1 at% or more and 10 at% or less.

6. The sputtering target for a magnetic recording medium according to any one of claims 1 to 5, wherein number of cracks in a B-rich phase is 2500 cracks/mm^2.

7. The sputtering target for a magnetic recording medium according to any one of claims 1 to 6, wherein the sputtering target has a maximum magnetic permeability (μ_{max}) of 50 or less.

8. ~~(Amended)~~ A process for producing a sputtering target for a magnetic recording medium, wherein a Co-Pt-B-based alloy cast ingot is subject to heat treatment, thereafter subject to hot rolling and cold rolling at a total rolling reduction of 10 to 90%, which includes at least one pass of cold rolling, to cause an average grain area of a B-rich phase to be 90 μm^2 or less, and thereafter machined to prepare a target.

9. ~~(Amended)~~ A process for producing a sputtering target for a magnetic recording medium, wherein a Co-Pt-B-based alloy cast ingot is subject to heat treatment,

thereafter subject to hot rolling and cold rolling (primary rolling) at a total rolling reduction of 10 to 90% which includes at least one pass of cold rolling and further subject to hot rolling and cold rolling (secondary rolling) at a total rolling reduction of 1.0 to 10%, which includes at least one pass of cold rolling, to cause an average grain area of a B-rich phase to be 90 μm^2 or less, and thereafter machined to prepare a target.

10. ~~(Amended)~~ The process for producing a sputtering target for a magnetic recording medium according to claim 9, wherein initial rolling of the primary rolling and the secondary rolling is hot rolling.

11. ~~(Amended)~~ The process for producing a sputtering target for a magnetic recording medium according to any one of claims 8 to 10, wherein the sputtering target for a magnetic recording medium according to any one of claims 1 to 7 is produced.